

The University of Iowa
College of Liberal Arts and Sciences
Department of Statistics and Actuarial Science

Introduction to Mathematical Statistics II, STAT:3101

Spring 2017

2:30-3:20 MWF, 40 SH

<http://homepage.stat.uiowa.edu/~mbognar>

▷ **General Information**

- *Instructor:* Matt Bognar, 358 SH, 335-0799, matthew-bognar@uiowa.edu
- *Office Hours:* 12:00-1:30 Tuesday, 1:30-3:00 Thursday, and by appointment
- *DEO:* Prof. Joe Lang, 241 SH, 335-0712
- *Textbook:* Hogg, Tanis, and Zimmerman (2015). *Probability and Statistical Inference, 9th edition*, Pearson.
- *ICON/Web:* This course will use ICON (<http://icon.uiowa.edu>) and our course website for announcements, homework assignments, etc.

▷ **Course Objectives**

- In this course we will cover the following topics:
 - * Transformations – one (CDF and Jacobian method) and two (Jacobian method) variables, MGF technique
 - * Point estimation – descriptive statistics, order statistics, maximum likelihood estimation, Bayesian estimation, sufficiency
 - * Statistical inference – CIs and hypothesis testing (one and two means, one and two proportions, nonparametric statistics, chi-square goodness of fit and contingency tables, one factor ANOVA, simple regression)
- We will cover much of the material in Chapters 6–9 in the textbook; some sections will be skipped, however (focus your readings on the material that was covered in class). Supplementation to the textbook, when needed, will be provided.

▷ **Grading**

- *Exams:* There will be 2 midterms (17.5% each) and a final exam (25%). The midterm exams will be 50 minutes in length, while the final exam will be 2 hours in length. Exam dates:
 - * Exam 1: Friday, February 17 (in class)
 - * Exam 2: Friday, March 31 (in class)
 - * Final Exam: TBA

Students are expected to be present for the exams at the *scheduled time*. It is your responsibility to make the appropriate arrangements *beforehand*.

- *Quizzes:* (25% total) A quiz will be given in lecture each Friday (except on exam days). *Make-up quizzes will not be allowed under any circumstances*. The lowest two quiz scores will be dropped. Unannounced quizzes may be given at any time.
- *Homework:* (15% total) Homework will be due each Friday. Because the TA will not have enough time to grade each problem, a subset of the assigned problems will likely be graded. *Late homework will not be accepted under any circumstances*. The lowest two homework scores will be dropped. *Homework must be stapled, defuzzed, be neatly written, and look professional (points will be deducted for failing to do so)*. Excessively sloppy homework will receive a score of 0. Print your name in the upper right corner of your homework before handing-in.
- Your attendance, participation, preparedness, work ethic, etc. may affect your grade.
- This course uses the +/– grading system (i.e. grades such as A–, B+, and B will be assigned).

- Grade cutoffs will be no higher than the usual 90, 80, 70, 60 breakdown.
- A list of private, non-free tutors can be found at <https://stat.uiowa.edu/resources/tutoring>.
- Bonus points may be given at any time, and may be applied to any part of your grade.

▷ ***The College of Liberal Arts and Sciences Policy and Procedures***

- *Administrative Home:* The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at <https://clas.uiowa.edu/students/handbook>.
- *Electronic Communication:* University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences (Operations Manual, III.15.2, k.11).
- *Accommodations for Disabilities:* The University of Iowa is committed to providing an educational experience that is accessible to all students. A student may request academic accommodations for a disability (which includes but is not limited to mental health, attention, learning, vision, and physical or health-related conditions). A student seeking academic accommodations should first register with Student Disability Services and then meet with the course instructor privately in the instructor's office to make particular arrangements. Reasonable accommodations are established through an interactive process between the student, instructor, and SDS. See <https://sds.studentlife.uiowa.edu/> for information.
- *Academic Honesty:* All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College's Code of Academic Honesty: "I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty." Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).
- *CLAS Final Examination Policies:* The final examination schedule for each class is announced by the Registrar generally by the fifth week of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar's web site and will be shared with instructors and students. It is the student's responsibility to know the date, time, and place of a final exam.
- *Making a Suggestion or a Complaint:* Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic Policies Handbook).
- *Understanding Sexual Harassment:* Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Office of the Sexual Misconduct Response Coordinator for assistance, definitions, and the full University policy.
- *Reacting Safely to Severe Weather:* In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.